



# Ethanol and Energy

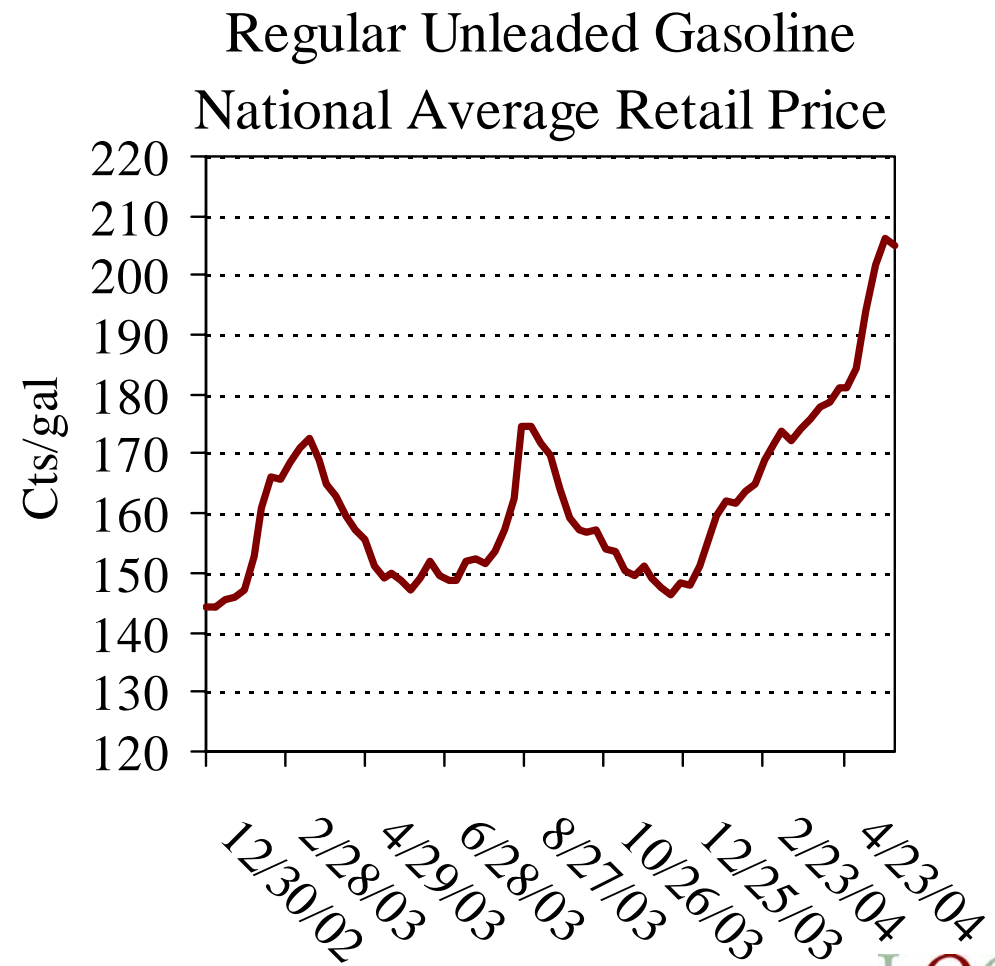
**14<sup>th</sup> Annual EPAC Ethanol Conference**  
**Helena, MT**  
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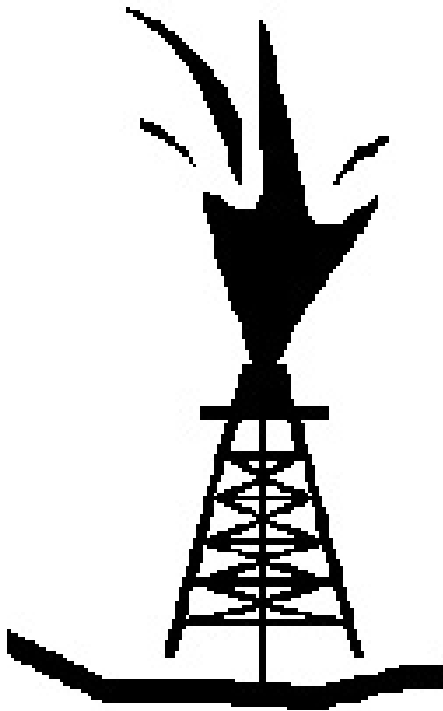
LECG

## America needs renewable fuels!





## The U.S. oil industry is in a bind



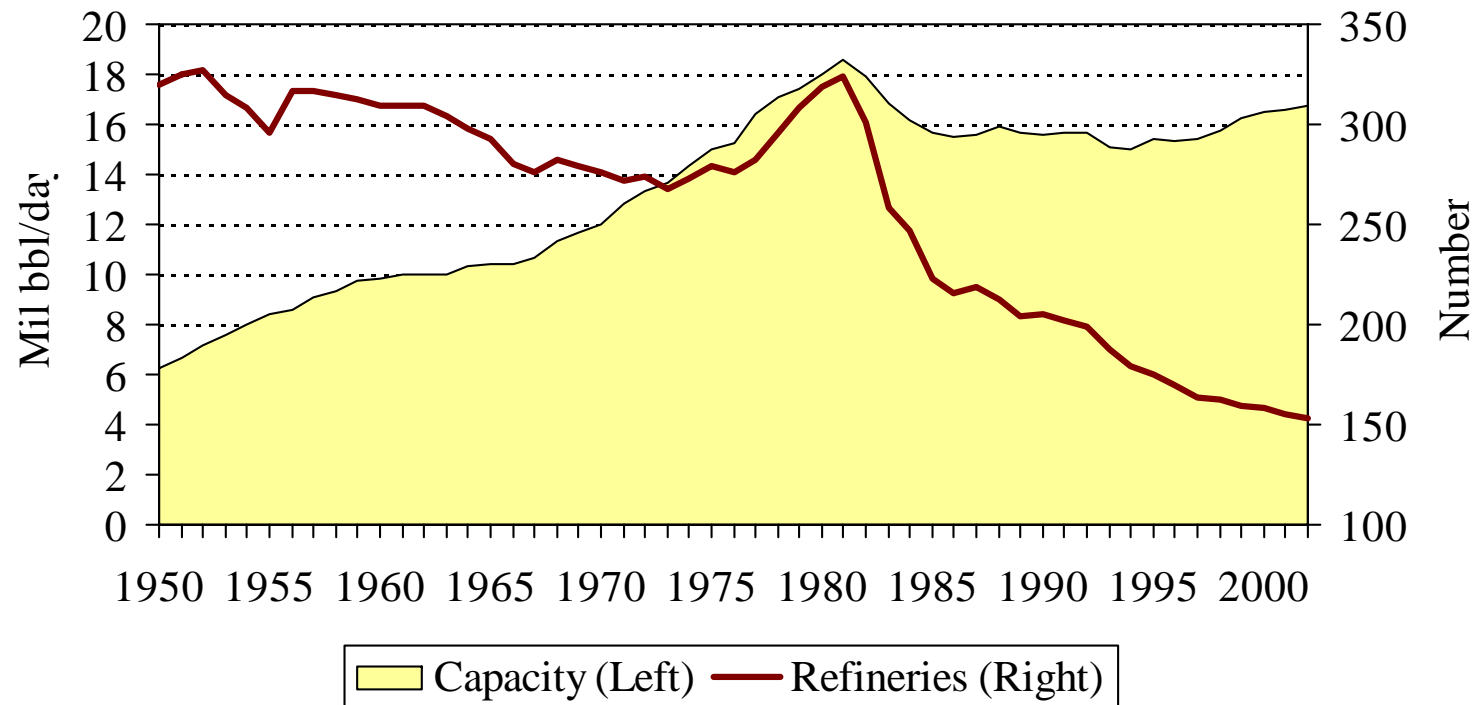
“Even with the Organization of Petroleum Exporting Countries pumping more oil, U.S. refineries will be hard-pressed to turn that crude into substantially more gasoline. Scores of inefficient refineries have closed during the past two decades, and though existing refineries have expanded, supply is getting tight. Today, the average U.S. refinery is running at 96% of its capacity -- nearly flat-out.”

Jeffrey Ball  
The Wall Street Journal  
*June 7, 2004; Page A3*



**No new refineries are being built. Gasoline output is being maintained by increasing utilization.**

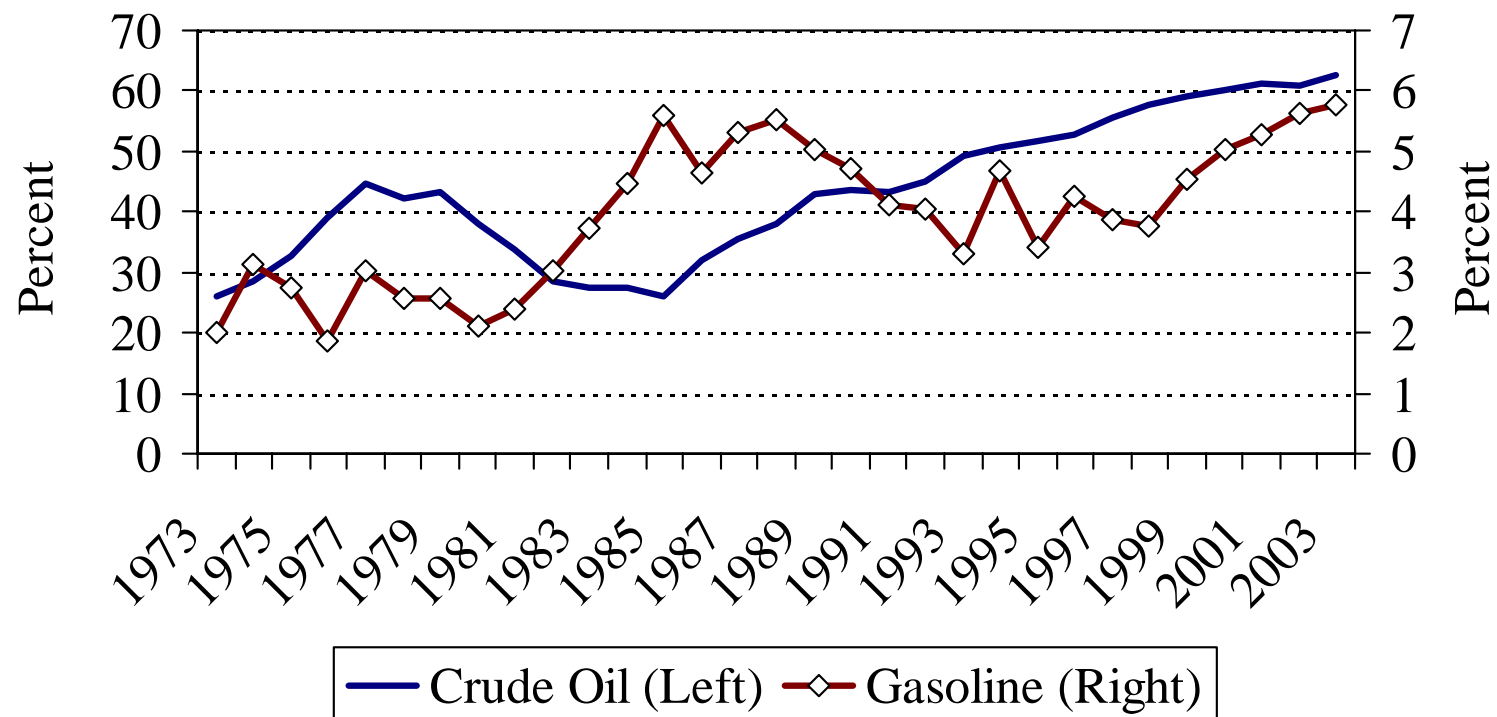
### U.S. Gasoline



Source: DOE/EIA.

## Our dependence on imported oil and finished gasoline continues to grow.

Import Share of Supply



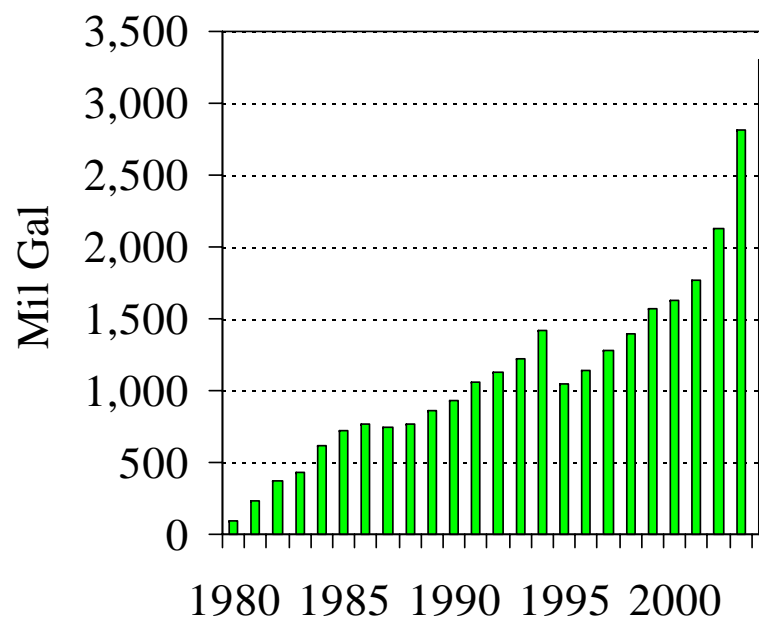
Source: DOE/EIA.



## Renewable fuels are part of the solution.

- ❖ Ethanol and biodiesel extend supplies of gasoline and diesel fuel.
- ❖ At current production levels ethanol increases the supply of motor fuel available to consumers by 2.5%.
- ❖ Renewable fuels reduce air pollution.

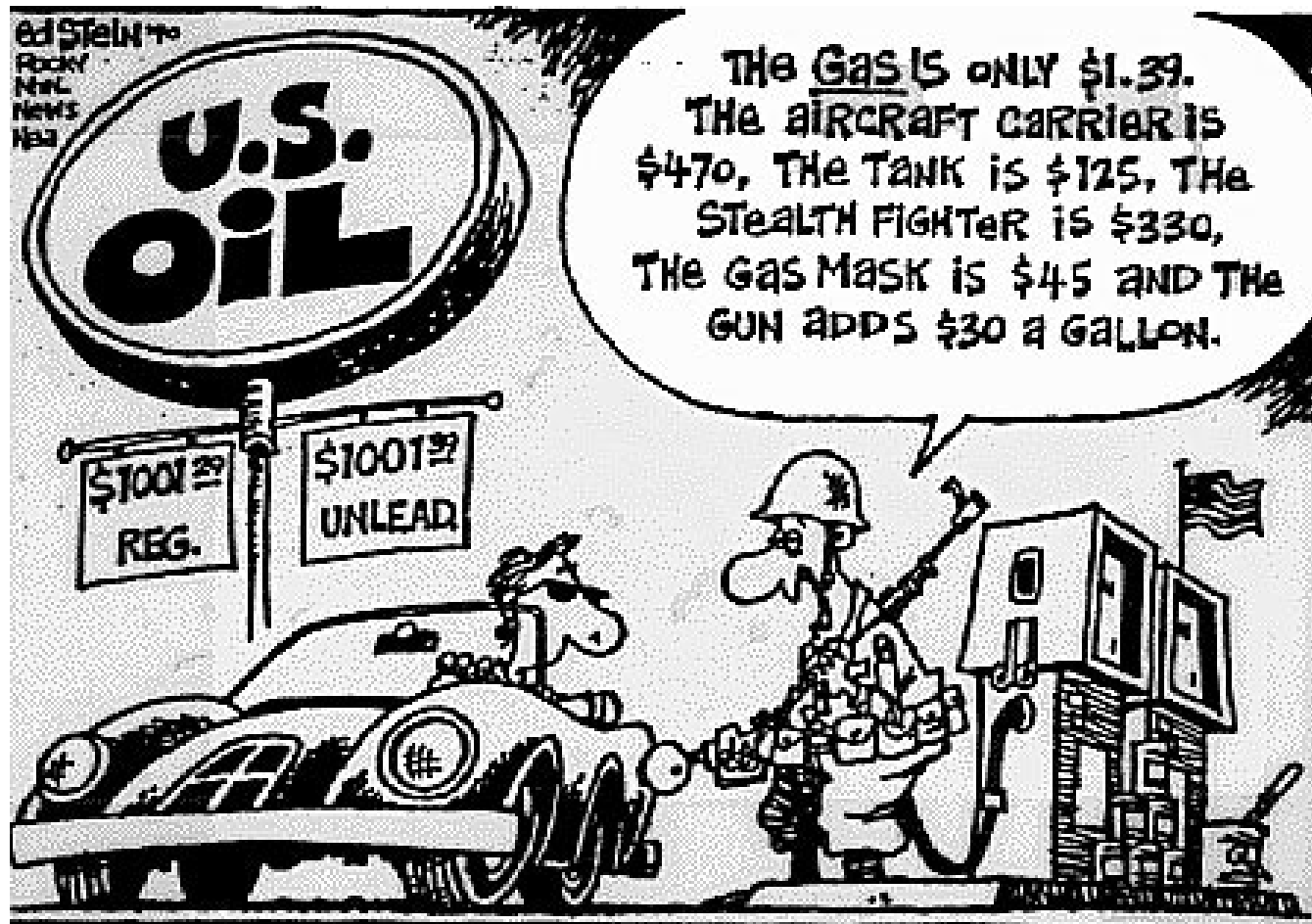
Ethanol Production



## Ethanol's share of supply may be small but its short-term impact is large!

- ❖ If the ethanol industry were to disappear overnight, the oil industry would have to find another 3.3 billion gallons of gasoline.
- ❖ In the short-term both the demand and supply of gasoline are inelastic.
  - Output would have to quickly increase in a capacity constrained industry.
  - Imports would have to increase 50% immediately.
- ❖ Until supplies could expand, prices at the pump would rise as much as 14.6%, or 26 cents per gallon at today's prices.
- ❖ The long-term impact would be smaller since both consumers and producers would be able to adjust, resulting in a 3.2% increase, or about 6.4 cents/gal.

## What is the real price of gasoline?

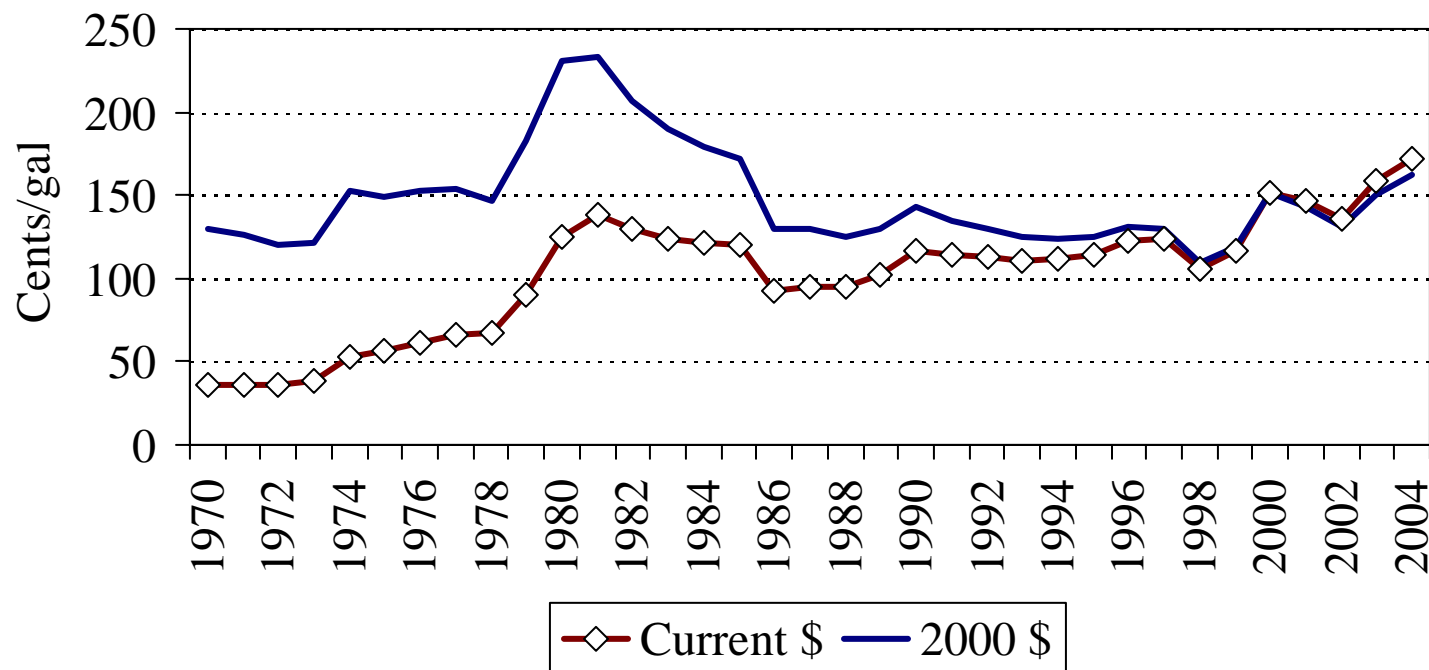






## Nominal gasoline prices have hit new record highs. Question is ... what does gasoline really cost?

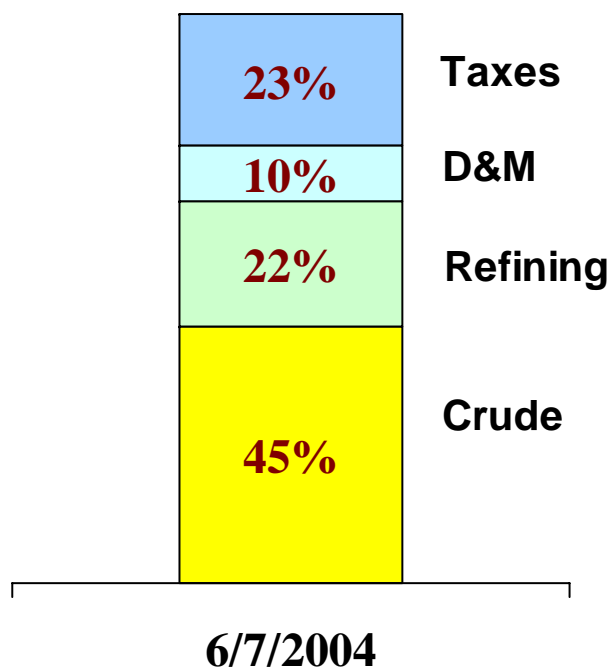
Retail Gasoline Prices



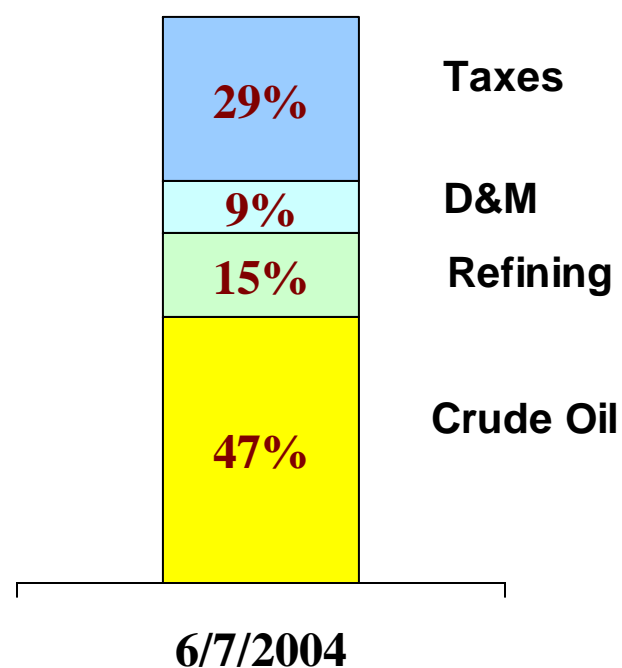


## This is what the Government says ...

**Gasoline \$2.034**



**Diesel \$1.734**



Source: EIA

**However, the real cost of gasoline includes other factors that don't get reflected in the retail price.**

❖ Tax subsidies

- Federal and State tax breaks to help domestic companies compete with foreign producers
- Estimated at \$9.1 to \$17.8 billion

❖ Program subsidies

- Support for the extraction, production, and use of petroleum.
- Includes transportation infrastructure, R&D, and regulatory oversight.
- Estimated at \$38 to \$114.6 billion



## More factors that don't get reflected in the retail price of gasoline.

### ❖ Protection subsidies

- Spending to safeguard the world's petroleum resources and our access to them.
- DoD; USCG; DOT Maritime Administration
- Estimated at \$80 to \$130 billion.

### ❖ Environmental, Health and Social Costs

- Largest category estimated at \$232 to \$943 billion.

### ❖ Other External Costs

- Estimated at \$191 to \$475 billion



## These costs significantly increase the “real” price of gasoline!

	Low	High
Retail Price	\$2.034	\$2.034
Other Costs*		
Tax Subsidies	\$0.066	\$0.132
Program Subsidies	\$0.279	\$0.846
Protection Subsidies	\$1.404	\$3.485
Environment/Health/Social	\$1.706	\$6.934
Other External	\$0.662	\$1.037
Subtotal Other	\$4.118	\$12.434
<b>Fully Loaded Price</b>	<b>\$6.152</b>	<b>\$14.468</b>

*\*Calculated on the basis of 136 billion gallons of gasoline.*

*Source: ICTA and EIA*

However, higher prices are not the only effect of increased dependence on imported oil.

### WIZARD OF ID





## **A recent NDCF study looked at the hidden costs of imported oil and concluded:**

- ❖ Defense outlays to ensure the flow of Persian Gulf oil total nearly \$49 billion.
- ❖ The total economic penalties resulting from dependence on imported oil total between \$297.7 and \$304.9 billion, and include:
  - The annual loss of \$159.9 billion in GDP.
  - The loss of 828,400 jobs in the U.S. economy
  - The annual loss of \$13.4 billion in federal and State tax revenues.

Source: “The Hidden Cost of Imported Oil”. National Defense Council Foundation. 2003.





**Compare these losses to the contribution the ethanol industry will make to the American economy this year alone.**

- ❖ The economic impact of \$700 million in capital spending for new capacity and \$4.6 billion in operating costs include:
  - Increasing GDP \$8.9 billion.
  - Supporting the creation of 143,300 jobs
  - Increasing household income \$3.9 billion
  - Adding \$2.1 billion to Federal and State tax revenues.
- ❖ And this does not include biodiesel!





## In conclusion ...

- ❖ America's dependence on imported oil is growing and consumers are paying a stiff price.
- ❖ The pump price of gasoline reflects only a small share of the true costs oil.
- ❖ Renewable fuels are part of the solution. They extend the supply of motor fuel at a reasonable cost to consumers and the economy.
- ❖ Renewable fuels offset some of the negative economic consequences of our dependence on imported oil.



**America needs both!**

